THE INSTITUTE OF PHYSICS

47, BELGRAVE SQUARE, LONDON, S.W.1

BULLETIN

No. 7 *Information in this circular is not intended for general publication: your copy should not therefore be passed to a library.* JULY 1950

NOTICES TO MEMBERS

Conference of Branch and Group Officers

The seventh conference of Honorary Officers of Branches and Groups was held in the Institute's House on May 17th, 1950. The President was in the Chair, and there were present the Honorary Treasurer and Honorary Secretary, twenty-six representatives of Branches and Groups, and the permanent officers. There was frank discussion of matters raised by the local Committees and a number of recommendations were forwarded to the Board.

Following a report on the recent changes in membership regulations and in subscriptions, there was discussion on possible developments in Group activities and services.

The Conference was strongly in favour of the extension and intensification of the Institute's concern with professional questions including economic problems. It was unanimously resolved that the Board should give consideration to methods of improving the economic status of all physicists and particularly of improving the conditions and salaries of those Fellows and Associates of the Institute who are teachers in schools. It was suggested that the Board might consider the reference of these matters to the Joint Council of Professional Scientists with a view to the latter body communicating with appropriate bodies.

A statement was made by the President about the method of selection of the Board's nominees for the Honorary Offices and for the ordinary membership of the Board. The Conference welcomed this statement and expressed the opinion that the present method was entirely satisfactory and should be continued.

The Secretary reported the tentative plans for Institute Conferences for the next four years. The Conference expressed satisfaction with this broad plan, (i) that no rigid policy should be laid down, but that no conferences or conventions at Institute level should be attempted in 1951 in view of the many other functions which will be taking place in connection with the Festival of Britain that year, (ii) that preliminary consideration should be given by the Officers at an early date to the holding in 1952 of a Conference on Industrial Physics, to be held in co-operation with the local Branch, along similar lines to those held in 1935, 1937 and 1939, and to the holding of an Institute Convention in 1953 along lines similar to that held in Buxton in 1949, but possibly having more sessions on applied physics intended particularly for non-members.

There was a short discussion on the negotiations with the Physical Society with a view to possible amalgamation.

National Certificates in Applied Physics

The number of colleges holding courses for the National Certificates in Applied Physics is still increasing very satisfactorily and the number of candidates sitting for the 1950 examinations for the Ordinary Certificate was almost double the 1949 entry. This year the first candidates were entered for the Higher Certificate (by Northampton Polytechnic, London), and at least three other colleges will next session be commencing the final year course for this award. For the benefit of members whose assistants may wish to study for these Certificates, a full list of colleges offering courses will shortly be published in the Bulletin.

A pamphlet describing the nature of the courses has been prepared and papers previously set in examinations for the Ordinary National Certificate in Applied Physics have now been reprinted. Copies of these publications are available, gratis, on application to the Secretary of the Institute.

Newly-formed Institution

We are glad to announce the formation and incorporation of the International Institute for the Conservation of Museum Objects, of which F. I. G. Rawlins (Fellow) has been elected Vice-President and Secretary General. Those wishing to have details of membership of either the professional grade (Fellow) or the non-professional grade (Associate) should write to Mr. Rawlins at the offices of the new Institute, 1, Montague Place, Bedford Square, W.C.1.

Who was the Lord Mayor of London in Kelvin's day? Who, in Maxwell's year, was the master of Trinity College? We do not care because those things do not really matter. Sic transit gloria—but not for the man who discovers a law of nature. He has already begun to live for ever.

W. V. HOUSTON

Institute Records

Fellows, Associates, Graduates, Subscribers and Students are asked to co-operate in maintaining the Institute's records by giving early notification of changes of address or appointments, award of honours, degrees and so on. It would be helpful if, on notifying changes of address, the previous address were also given since this avoids confusion between members of the same name and initials. Inclusion of a reference to any Groups to which the member belongs is a further assistance in effecting rapidly the changes of records and address stencils.

Remission of Subscriptions of Members of Long Standing

Members over sixty-five years of age who have been Members continuously for at least twenty years are reminded that they may, if they so wish, have their future annual subscriptions remitted. If they elect to do this, however, they are then only entitled to the Institute's publications upon the same special terms as are current for Students. Members wishing to take advantage of this concession should notify the Secretary.

CORRESPONDENCE

I hope you will not mind if I protest strongly against the inclusion of the Bernard Shaw quotation on page 3 of the May *Bulletin*. Most of us are educated enough to see clearly the point which Mr. Shaw is trying to make without any help from him, and this kind of quotation does much damage in that it props up the widespread view, among those "educated" mainly in the dead languages, that if a man has good science degrees it must follow that he is a noodle or a "yes-yes" man.

I do not think the Institute needs to go to Shaw for its wisdom. Shaw has no scientific distinction so that it is not in very good taste for him to decry those who have, and it is better for the Institute to ignore such obloquy.

ARTHUR L. GREGSON (*Fellow*).

(*It was not realised that the quotation might be interpreted in the way Dr. Gregson complains of, nor does such an interpretation seem likely to be generally made. The point which Mr. Shaw makes, in a way which some might consider amusing as well as forceful, has frequently been put by prominent industrial scientists who have stressed the importance of developing the personal qualities of graduates. Mr. Shaw's lack of scientific distinction was not thought to be relevant: scientists speak, from time to time, on wider issues and, we hope, are sometimes quoted by non-scientists.*—ED.)

FORTHCOMING CONFERENCES

International Congress of Radiology

The sixth International Congress of Radiology is to be held in London from July 23rd to 29th, 1950. The headquarters will be at the Central Hall, Westminster, and meetings will be held at Church House and Caxton Hall.

In addition to a scientific exhibition at the Central Hall, there will be a technical exhibition of apparatus in the Halls of the Royal Horticultural Society, where the Industrial Group of the Institute is also holding its summer meeting and members' exhibition. A stand in the main technical exhibition has been kindly placed at the disposal of the Institute for the display of its journals and other publications. Tickets for the exhibition have been sent to all members of the Industrial Radiology Group, and may be obtained by other members of the Institute on application to the Secretary.

Biological Hazards of Atomic Energy

A two-day meeting is being arranged, jointly between the Institute of Biology and the Atomic Scientists' Association, on the subject of atomic energy and its biological hazards, and will be held at the Royal Institution, Albemarle Street, W.1., on Friday, 20th, and Saturday, 21st October, 1950. The object of the meeting is to consider, on the basis of the available facts from both the biological and physical aspects, the possible biological hazards arising from the development and application of atomic science now and in the future. The meeting will comprise four sessions as follows: I. Biological and medical effects of nuclear radiations; II. Tolerance levels and measures of protection; III. Biological implications; IV. Atomic energy and the biological future. In each session, opening addresses will be given by invited speakers and will be followed by discussion. Preliminary arrangements are being made by a joint committee (Professor K. Lonsdale, Dr. F. C. Champion, and Professor J. Rotblat, representing the Atomic Scientists' Association; Dr. E. Hindle and Professor Alex. Haddow, representing the Institute of Biology). A detailed programme will be published in due course. Enquiries may be addressed to Prof. Haddow at the Chester Beatty Research Institute, Royal Cancer Hospital, Fulham Road, S.W.3.

London Conference on Optical Instruments

The London Conference on Optical Instruments is to be held in the physics department of the Imperial College of Science and Technology from July 19th to 26th, 1950. The object of the conference is to obtain a survey of modern practice and trends in the construction of actual instruments, and papers of mainly theoretical interest have not been solicited. Application forms and admission tickets may be obtained from the Secretary, London Conference on Optical Instruments, Imperial College of Science and Technology, London, S.W.7.

Building Research Conference in 1951

A comprehensive congress on building research is to be held in London from September 11th to 20th, 1951, and will be the first of its kind ever to be held.

The congress is sponsored by the British professional institutions and learned societies interested in building science, and by government departments, with the support of representative industrial federations in Great Britain. The Department of Scientific and Industrial Research is providing the central organization for the conference. Papers are being invited from research workers in many countries on a wide range of topics, and arrangements are being made to welcome to the congress a large number of visitors from overseas.

Announcements of detailed arrangements will be made in due course, but those interested should notify the Organizing Secretary as soon as possible in order that detailed information may be sent direct. The address is The Organizing Secretary, Building Research Congress, 1951, Building Research Station, Bucknalls Lane, Garston, Watford.

Conference on Automatic Control—1951

A Conference on Automatic Control will be held in the Summer of 1951 (Monday, July 16th to Saturday, July 21st, 1951). It will embrace the following main topics:

Servo Control Systems: General Theory and problems of Synthesis.

Servo Control Systems: Non-linearities.

Process Control: Inter-relation with Servo Control.

The Juman Operator.

There will, in addition, be provision for a limited display of apparatus having a bearing on the subject of the Conference.

The Conference is being sponsored by the Department of Scientific and Industrial Research, and the Organising Committee is under the Chairmanship of Professor A. Tustin, of the Department of Electrical Engineering, Birmingham University. The Committee hopes that a high standard of paper will be forthcoming and invites contributions. Potential contributors should submit a title and brief synopsis of any material they might wish to present, to the Secretary of the Committee, Mr. R. G. Silversides, at D.S.I.R., Headquarters, Charles House, 5–11 Regent Street, London, S.W.1, by July 22nd, 1950, for consideration by the Committee.

Papers which are ultimately selected for presentation will be required in their final form not later than January 1st, 1951. Only in exceptional circumstances will papers in excess of 5,000 words be accepted.

Second Conference on the Rational Allocation of Coal

The Combustion Engineering Association is holding a second conference on the Rational Allocation of Coal at the Palace Hotel, Buxton, on October 5th and 6th, 1950. The purpose of the conference is to allow users and makers of combustion equipment to discuss the classification of coal, the grades of coal which can be used with different types of equipment, and the combustion characteristics of different coals. Membership of the conference is open to all interested (there is a fee of two guineas) and details may be obtained from the Association at 24, Tottenham Court Road, W.1.

APPOINTMENTS VACANT

The inclusion of particulars of a vacancy must not be taken to imply that the Institute necessarily approves of the terms offered or that might be offered. Candidates should satisfy themselves that these are satisfactory, and they may always refer to the Institute for advice. A suggested form of contract under which a qualified physicist might reasonably be expected to serve is available on request.

Physicist required by the Physics Department of the British Scientific Research Association. Applicants should have a good Honours degree in physics and at least one year's research experience. The salary will be from £400 upwards according to qualifications. Apply, in writing, to the Director of Research at the Association's Laboratories, "Sira," Southill, Elmstead Woods, Chislehurst, Kent.

Graduate required for soil mechanics work. Previous experience advantageous but not essential. Salary £500 to £1,000 per annum according to qualifications. Write to Ground Explorations Limited, 75, Uxbridge Road, Ealing, London, W.5.

Junior Physicists or Electrical Engineers. Vacancies exist for graduates in the Electronics and Electrical Departments. Subjects covered include thermionic emission, electrical contact phenomena, electronic recording and controlling devices, electro-magnetic systems. Age 21–26. Experience not essential except in the case of thermionic emission, when some previous work on electron-emitting devices would be preferable. Salary in accordance with age and experience. Apply in writing to the British Scientific Instrument Research Association, "Sira," Southill, Elmstead Woods, Chislehurst, Kent.

Physicist required as section leader for work in metal physics, including soft magnetic materials. Candidates should have an honours degree in physics, post-graduate university or industrial experience in research and should be 27 or older. The post is a senior one and the salary will be from £700 p.a. according to age and experience. Applications giving full details should be addressed to the Director of Research, G.K.N. Central Laboratories, Manor Works, Ettingshall, Wolverhampton.

Ministry of Supply invites applications from **Physicists** for unestablished appointments in **Scientific Officer Class** at Research and Development Establishments near London.

Candidates should have a 1st or 2nd class honours degree in physics and good general electronic knowledge and experience. For one post familiarity with V.H.F. circuit techniques and modern valve design would be an advantage. Candidates for Senior posts must be at least 26 years of age and have had a minimum of 3 years' post-graduate research experience.

Salary according to age, qualifications and experience within ranges:—

Senior Scientific Officer £670–£860.
Scientific Officer £380–£620.

Posts carry F.S.S.U. benefits. Rates for women somewhat lower.

Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), York House, Kingsway, W.C.2, quoting A.172/50A111. Closing date *July 24th*, 1950.

Ministry of Supply invites applications from **Physicists** and **Electrical Engineers** for following unestablished appointments in

Scientific Officer Class at a Research and Development Establishment in the South Midlands.

Principal Scientific Officers (*A*.170/50*a*).—

1. To lead a team in electronics research with special reference to micro-wave techniques.
2. To lead a team engaged on development of fire control radar equipment. Considerable experience of either radar equipment, servo mechanisms or of general electronics is essential.

Candidates for these posts should be at least 31 years of age, possess an honours degree or equivalent in physics or electrical engineering and show evidence of a good record of individual research and development work and of administrative ability.

Scientific Officers (2 *Posts*) (*A*.171/50*a*).

For research and development work on Army radar equipment. Candidates should have a good honours degree in physics or electrical engineering with an interest in electronics or micro-wave techniques. Post-graduate experience is desirable but applications will be considered from 1950 potential graduates if accompanied by a letter of recommendation from Tutor or Professor. Salaries according to age, qualifications and experience within ranges:—

Principal Scientific Officers £910–£1,177.
Scientific Officers £380–£620.

Posts carry F.S.S.U. benefits. Rates for women somewhat lower.

Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), York House, Kingsway, W.C.2, quoting reference number. Closing date *July* 24*th*, 1950.

Paper Mill Chemist. A Graduate (or equivalent qualification) in Chemistry, Physics or Chemical Engineering required as Assistant in Works Chemist's Department of large modern paper mill. Experience of the paper industry is not essential. Salary according to qualifications and experience. Hostel accommodation is available for single men. Applications to Chief Mill Chemist, Albert E. Reed & Co., Ltd., Aylesford Paper Mills, Larkfield, nr. Maidstone, Kent.

Vacancies for Porosity Investigation. Applications are invited from suitably qualified persons for employment on the research staff of the British Cast Iron Research Association. Three vacancies exist:

1. Research worker with good basic scientific training and with some knowledge foundry practice, preferably a graduate.
2. Physicist, preferably with an honours degree in physics. Previous knowledge or experience of metallurgical research an advantage.
3. Metallurgist, preferably qualified in metallurgy or physics; research experience an advantage.

These three appointments will be required to investigate various aspects of the production of sound casting, involving considerations of metal flow into moulds, solidification rates and mechanisms. The appointments will be in the Scientific Officer or Senior Scientific Officer grades. The Scientific Officer salaries range from £390 to £635 per annum, and Senior Scientific Officer salaries from £685 to £880 per annum. The actual salary and grade will depend on experience and qualifications.

Applicants should submit full details of qualifications, age and experience to British Cast Iron Research Association, Alvechurch, Birmingham.

Ministry of Supply invites applications from **Physicists** for unestablished appointments as **Senior Scientific Officers** or **Scientific Officers** in a Research Establishment in London for the handling and measurement of radioactive materials.

Candidates must have an honours degree in physics and preferably have had experience in designing electronic equipment and D.C. amplifiers.

For S.S.O. appointments candidates must be at least 26 years of age and have had at least three years' post graduate research experience.

Salary according to age, date of graduation, and experience within range:—

Senior Scientific Officer, £700–£900.
Scientific Officer, £400–£650.

Posts carry F.S.S.U. benefits. Rates for women somewhat lower.

Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register, (K) York House, Kingsway, W.C.2, quoting A188/50A. Closing date *August* 24*th*, 1950.

Ministry of Supply invites applications from **Physicists** for unestablished appointments as **Experimental** or **Assistant Experimental Officers** in a Research Establishment in London for experimental work with radioactive materials including radiation measurements for health physics and instrument construction, calibration and maintenance.

Candidates should have at least Higher School Certificate or equivalent.

Higher qualifications would be an advantage, and experience in the field of radiology is desirable, particularly for the E.O. grade, candidates for which should be at least 28 years of age.

Salary according to age, qualifications and experience within ranges:—

Experimental Officer £525–£675.
Assistant Experimental Officer £230–£490.

Rates for women somewhat lower. Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register, (K) York House, Kingsway, W.C.2, quoting A 169/50A. Closing date *August* 24*th*, 1950.

Ministry of Supply invites applications from **Physicists** for unestablished appointments for **Scientific Officer** grade at Royal Aircraft Establishment, Farnborough, Hants.

(*a*) For work on display, computor and communication research (two posts).
(*b*) For work on V.H.F. and U.H.F. navigation, direction finding and lending systems (two posts).

Candidates should have a good honours degree in physics and some research experience in one of the fields outlined would be an advantage. Applications from 1950 potential graduates accepted, but preferably accompanied by a note on student's work from College Tutor or Professor.

Salary according to age, date of graduation, experience, etc., within scale £380–£620 (men), £380–£495 (women). Posts carry F.S.S.U. benefits.

Application forms obtainable from Ministry of Labour and National Service, Technical and Scientific Register (K), York House, Kingway, W.C.2, quoting Order No. A 184/50A. Closing date *August* 21*st*, 1950.

Commonwealth of Australia

Commonwealth Scientific and Industrial Research Organization

Appointment of Physicists for Wool and Textile Research.

The Commonwealth Scientific and Industrial Research Organization is at present developing a programme of wool textile research and is establishing laboratories in Melbourne, Sydney and Geelong. It is seeking the services of senior Physicists to take part in this work which will involve studies of the physical properties of single and massed fibres, such as elasticity and friction, and the basic principles underlying the action of some textile machines. At present two vacancies are available for Principal Research Officers [salary range £A990–£A1,150, plus cost-of-living adjustment (at present £A136 per annum)], and the Organization would be glad to hear from physicists who may be interested in these positions. Applicants should have honours degrees in physics or engineering and considerable research experience, though not necessarily in the textile industry.

Applications for the above positions stating full name, place and date of birth, nationality, present employment, particulars of qualifications and experience, and of war service, if any, accompanied by names and addresses of at least two persons willing to act as referees, if so desired, and by copies of not more than four testimonials, should reach the undersigned by August 28th, 1950.

The Organization would also like to hear from any other physicists who would be interested in undertaking textile research and enquiries should be forwarded to the undersigned, from whom further particulars about the positions and the conditions of service in C.S.I.R.O. may be obtained. J. E. Cummins, Chief Scientific Liaison Officer, Australian Scientific Liaison Office, Africa House, Kingsway, London, W.C.2.

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